

Fragment
Size
(pdb)

23130

9416

6557

4361

2322
2027

564

FIG. 1

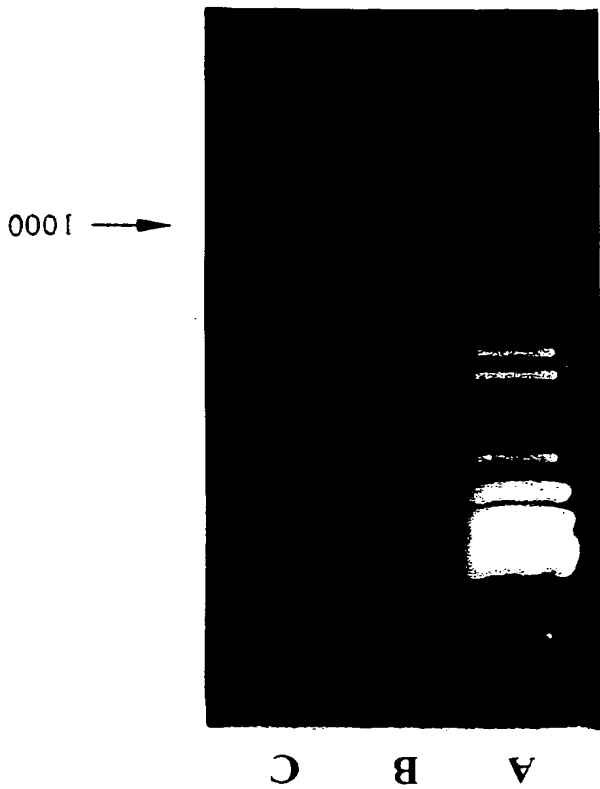




FIG. 2A

HsKin-mmKin pep 16 10 1997 16 00	10	20	30	40	50	60	70	80	90	100
hsKin17 . pep	MGKSDFLTPK AIANRIKSKG LQKLRWYQQM CQKQCRDENG FKCHCMSESH QKQLLASEN PQQFMDYFSE EFRNDFLELL RRRFQTKRVH NNIVVNEYIS									
mmKin17 . pep	* MGKSDFLSPK AIANRIKSKG LQKLRWYQQM CQKQCRDENG FKCHCMSESH QKQLLASEN PQQFMDYFSE EFRNDFLELL RRRFQTKRVH NNIVVNEYIS									
hsKin17 . pep	110	120	130	140	150	160	170	180	190	200
mmKin17 . pep	HREHIHMNAT QWETLDTFK WLGREGLCVK DETPKGWYIQ YIDRDPETIR RQLELEKSKK QQLDDEEKTA KFIEEQVRRG LEGKEQVPT FTELSRENDJ * *									
hsKin17 . pep	210	220	230	240	250	260	270	280	290	300
mmKin17 . pep	HREHIHMNAT QWETLDTFK WLGREGLCVK DETPKGWYIQ YIDRDPETIR RQLELEKSKK QQLDDEEKTA KFIEEQVRRG LEGKEQVPT FTELSRENEE									
hsKin17 . pep	EKVTFNLKSG ACCSSGATSS KSSLGLPSAL KTTIGSSASVK RKESQSSQ SKEKSKKSKSA LDEIMEIEEE KKRTARTDYW LQPEIIVKII TKKLGEKYHK * ** * * * * * * * * *									
mmKin17 . pep	EKVTFNLKSG AGGSAGATSS KSSSLGPSAL KLLGSAASGK RKESQSSS ARPAKSKKSA LDEIMEIEEE KKRTARTDAW LQPGIIVKII TKKLGEKYHK									
hsKin17 . pep	310	320	330	340	350	360	370	380	390	400
mmKin17 . pep	KKATVKEVID KYTAVVKMID SGRKLDQDT HLETVIPAPG KRILVINGGY RGMGTELES I NEKFSATIV IETGPLKGRR VEGIQYEDIS KLA * * * * * *									
hsKin17 . pep	410	420	430	440	450	460	470	480	490	500
mmKin17 . pep	KKGWVKEVID RYTAVVKMTD SGRKLDQDT HLETVIPAPG KRVLVINGGY RGMGTELES I NEKAFSATIV IETGPLKGRR VEGIQYEDIS KLA									
< =										
< =										



FIG. 2B

hsKin17-mmKin17	16	10	1997	15	59		10	20	30	40	50	60	70	80	90	100	
hsKin17 . seq							TGATTGGAGC	TCGGTACCCG	GGGATCCGAT	TAGAAAGTGA	TCGGTCCCGT	GGTCCGCCATG	GGGAAAGTCGG	ATTTTCTTAC	TCCCAGGCT	ATCGCCAAACA	
mmKin17 . seq													ATG	GGCAAGTCGG	ATTTTCTGAG	CCCCAAGGCT	AICGGCAATA
hsKin17 . seq							GGATCAAGTC	CAAGGGGCTG	CAGAAGCTAC	GCTGGTATTG	CCAGATGTGC	CAGAAGCCAGT	GCCGGGGAGCA	GAATGGCTTT	AAGTGTCAAT	GTATGTCCGA	
mmKin17 . seq							GAATTAAGTC	CAAGGGGCTC	CAGAAGCTTC	GCTGGTACTG	CCAGATGTGC	CAAAAGCAAT	GCCGGGAGCA	GAATGGCTTT	AAGTGTCAAT	GTATGTCCGA	
hsKin17 . seq							ATCTCATCAG	AGACAACTAT	TGCTGGCTTC	AGAAAATCCT	CAGCAGTTTA	TGGATTATTT	TTCAGAGGAA	TCCGAAATG	ACTTCTAGA	ACTTCTCAGG	
mmKin17 . seq							ATCTCATCAA	AGACAACTGT	TGCTGGCTTC	AGAAAACCCCT	CAGCAGTTTA	TGGATTATTT	TTCAGAGGAA	TCCGAAATG	ACTTCTGGA	ACTTCTGAGG	
hsKin17 . seq							AGACGCTTG	GCACTAAAAG	GGTCCACAAC	AACATTGTCT	ACAACGAATA	CATCAGCCAC	CGAGAGCACA	TCCACATGAA	TGCCACTCAG	TGGGAAACTC	
mmKin17 . seq							CGACGCTTG	GCACTAAAAG	GGTCCACAAC	AACATTGTCT	ACAATGAATA	CATCAGCCAC	CGAGAGCACA	TCCACATGAA	CGCTACCCAG	TGGGAGACAC	
hsKin17 . seq							TGACTGATT	TACTAAGTGG	CTGGGCAGAG	AAGGCTTGTG	CAAAAGTGGAC	GAGACACCAA	AAGGCTGTA	TATTCAGTAC	ATAGACAGGG	ACCCAGAAAC	
mmKin17 . seq							TGACCGACTT	TACCAAGTGG	CTGGGCAGAG	AGGGCTTGTG	TAAAGTGGAT	GAGACACCGA	AAGGCTGTA	CATTACAGTAC	ATAGACAGAG	ACCCAGAAAC	



FIG. 2C

	510	520	530	540	550	560	570	580	590	600
hsKin17 . seq	TATCCGCCGG	* CAACTGGAC	TGGAGAAAA	GAAAAAGCAG	GACCTTGATG	ATGAAGAAAA	AACTGCCAAA	TTTATTGAAG	AGCAAGTGAG	AAGAGGCCCTG
	*	*	*	*	*	*	*	*	*	*
mmKin17 . seq	CATCCGTGGG	CAACTGGAAT	TAGAAAAAAA	GAAAGAAGCAA	GATCTGGACG	ATGAAGAAAA	AACTGCCAAG	TTCATTGAGG	AGCAGGTGAG	AAGAGGCCCTG
	610	620	630	640	650	660	670	680	690	700
hsKin17 . seq	GAAGGGAAGG	AACAGGAGGT	CCCTACTTTT	ACGGAATTA	GCAGAGAAAA	TGATGAGAG	AAAGTCACGT	TTAATTTGAG	TAAAGGAGCA	TGTAGCTCAT
	*	*	**	*	*	*	*	*	*	*
mmKin17 . seq	GAAGGGAAGG	AGCAGGAGAC	ACCTGTTTTT	ACAGAACTTA	GCCGAGAAAA	TGAGGAGAA	AAAGTTACGT	TCAATCTGAA	TAAAGGAGCG	GGTGGCTCAG
	710	720	730	740	750	760	770	780	790	800
hsKin17 . seq	CCGGAGCAAC	ATCTTCCAAG	TCAAGTACTC	TGGACCAGG	TGGACTGAAG	ACCATAGGAA	GTTCAGCATC	AGTGAACCGA	AAAGAACTTT	CCCAGAGCTC
	*	*	**	*	**	*	**	*	*	*
mmKin17 . seq	CGGGAGCTAC	AACATCCAAG	TCAAGCTCTT	TGGACCACAAG	TGGACTGAAG	CTGCTGGGGA	GCGCAGCATC	CGGGAACCGG	AAAGAGTCTT	CACAGAGCTC



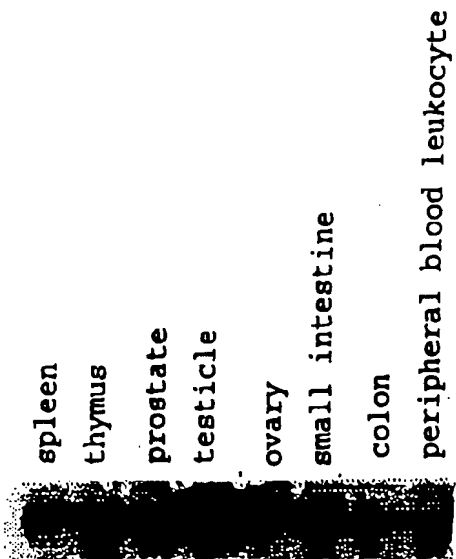
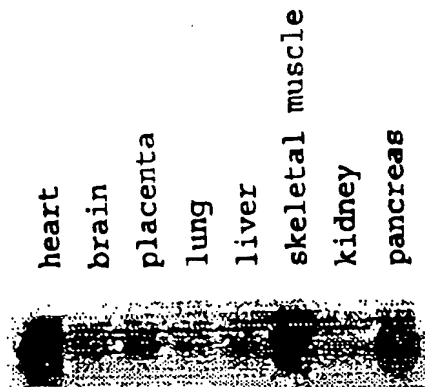
FIG. 2D

hsKin17-mmKin17	16	10	1997	15	59	810	820	830	840	850	860	870	880	890	900
hsKin17 . seq	AACTCAGTCT	AAAGAAAAGA	AGAAAAGAA	ATCTGCAC	TGGAGATTGA	AGAGGAAAAG	AAAAGAACTG	CCCGAACAGA	CTACTGGCTA						
mmKin17 . seq	CGCCAGCCT	GA	GC	AGAGAGAGAA	GTCGGCCCIG	GATGAGATCA	TGGAGCTCGA	AGAGGAAAAG	AAAAGGACCG	CACGGACAGA	CGCCTGGTTA				
hsKin17 . seq	CAGCCTGAAA	TTATTGTGAA	AATTATAACC	AAGAACTGG	GAGAGAAATA	TCATAAGAA	AAAGGCTATT	GTTAAGGAAG	TAATTGACAA	ATATACAGCT					
mmKin17 . seq	CAGCCGGGA	TCGTTGTGAA	AATTATAACC	AAGAACTGG	GGGAGAAATA	TCACAAGAA	AAAGGGG	TC	GTTAAGGAAG	TGATTGACAG	GTACACAGCT				
hsKin17 . seq	GTTGTGAAGA	TGATTGATTC	TGGAGACAAG	CTGAACTTG	ACCAGACTCA	TTTAGAGACA	GTAATCCAG	CACCAGGAAA	AAGAATTTCTA	GTTTAAATG					
mmKin17 . seq	GTGGTAAAGA	TGACTGACTC	TGGAGACAGG	CTGAACTGG	ACCAGACTCA	TTTAGAGACA	GTCATTCCGG	CCCCGGGAA	AAGGGTTCTA	GTTTAAATG					
hsKin17 . seq	GAGGCTACAG	AGGAAATGAA	GGTACCCTAG	AATCCATCAA	TGAGAGACT	TTTTCAGCTA	CTATCGTCA	TGAACTGGC	CCTTTAAAG	GACGCAGAGT					
mmKin17 . seq	GAGGCTACAG	AGGAAATGAA	GGCACTCTCG	AATCCATCAA	TGAGAGACT	TTTTCAGCTA	CGATAGTCA	TGAACTGGA	CCTTTGAAG	GACGCAGAGT					



FIG. 3A

Kin-17



β Actin

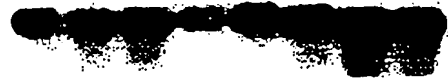
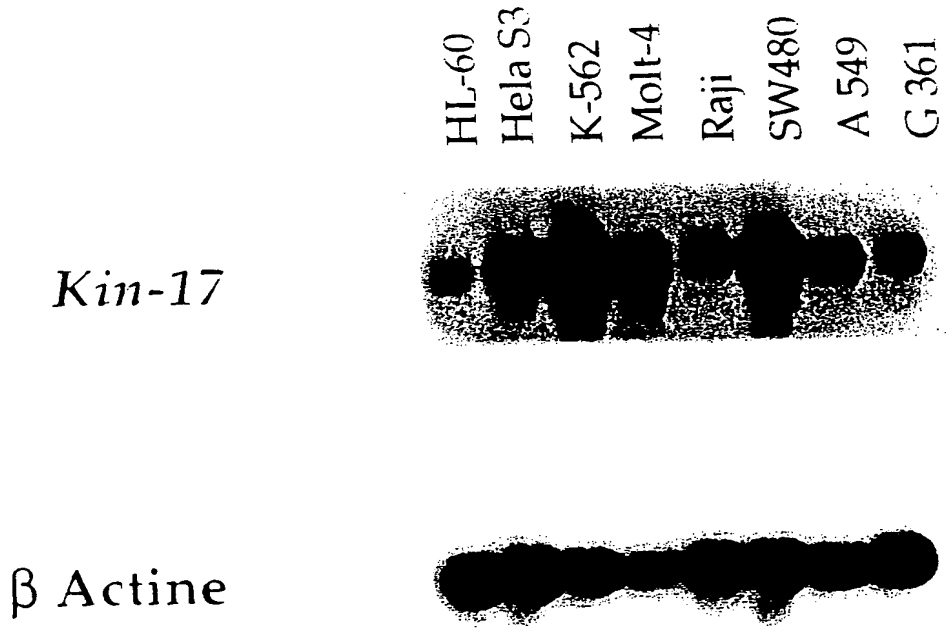




FIG. 3B



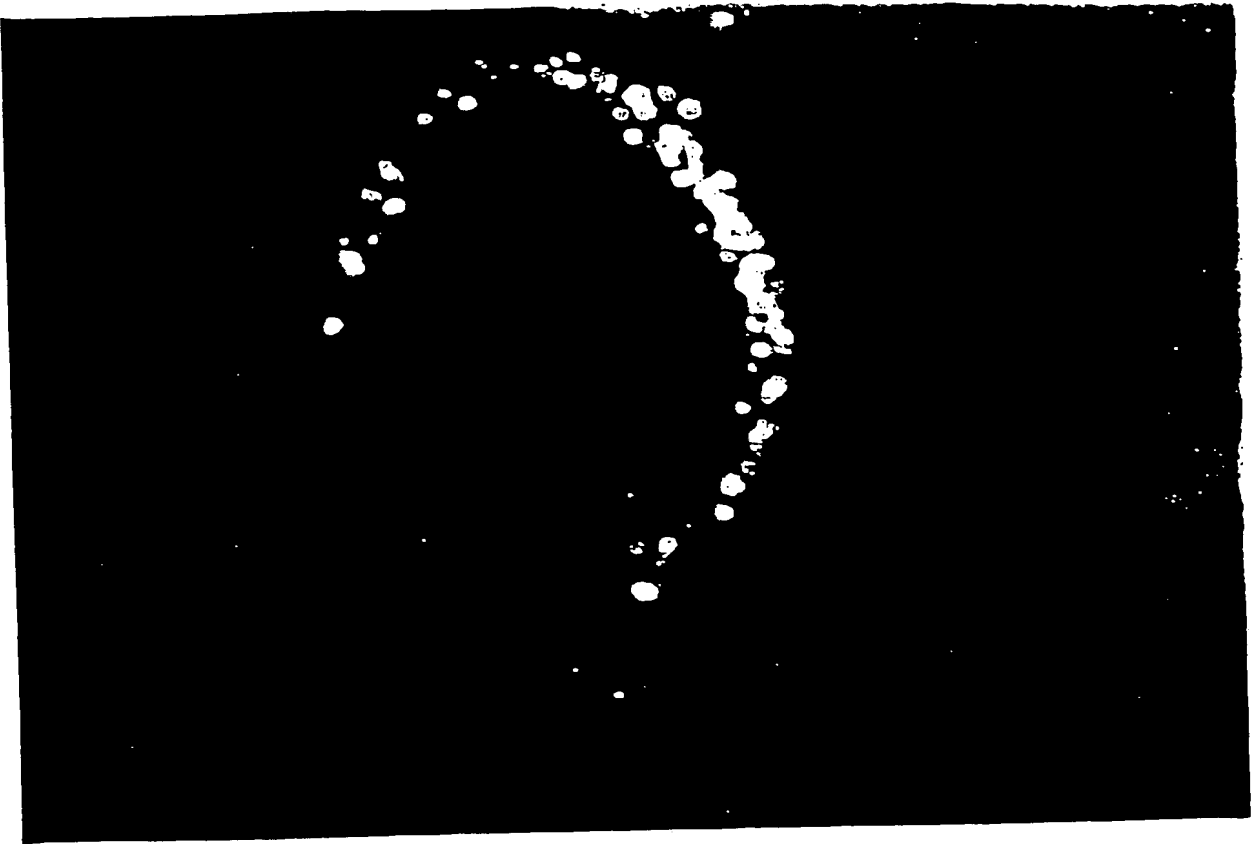


FIG. 4A

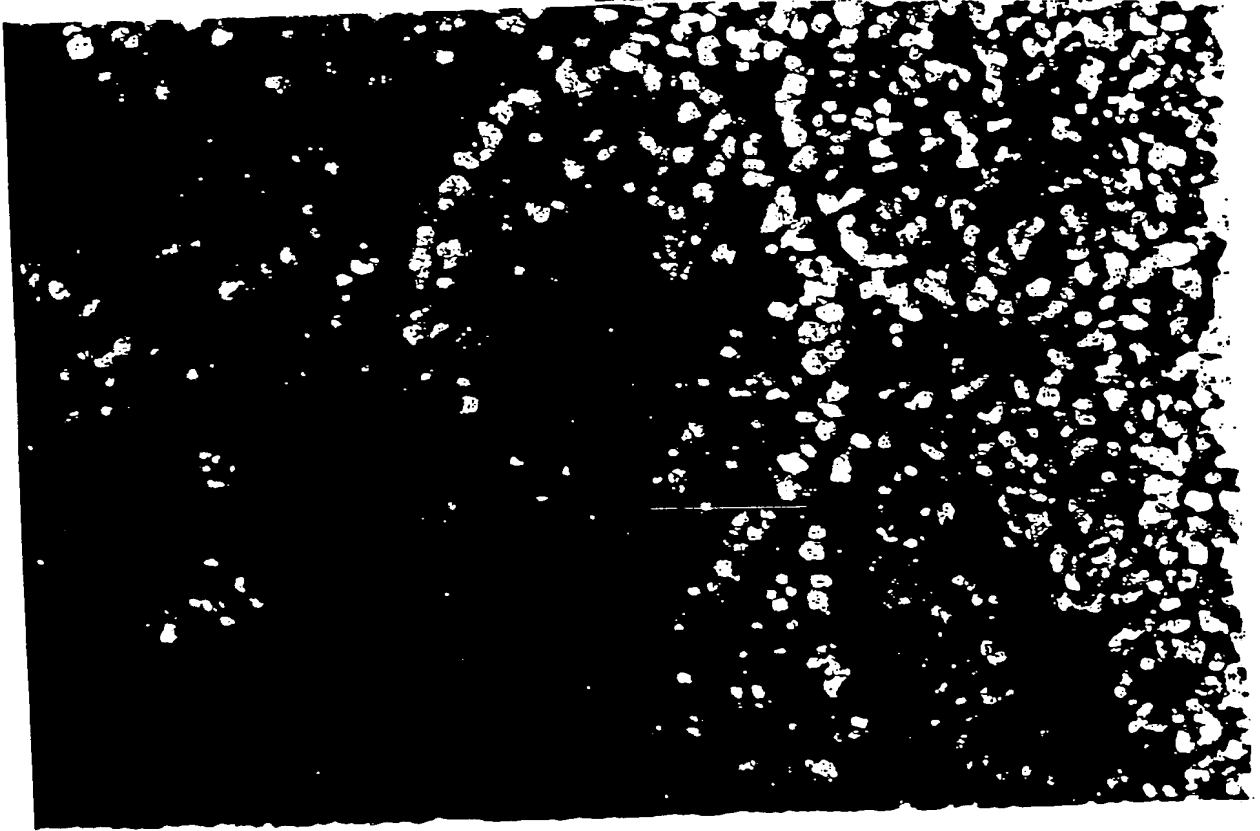


FIG. 4B

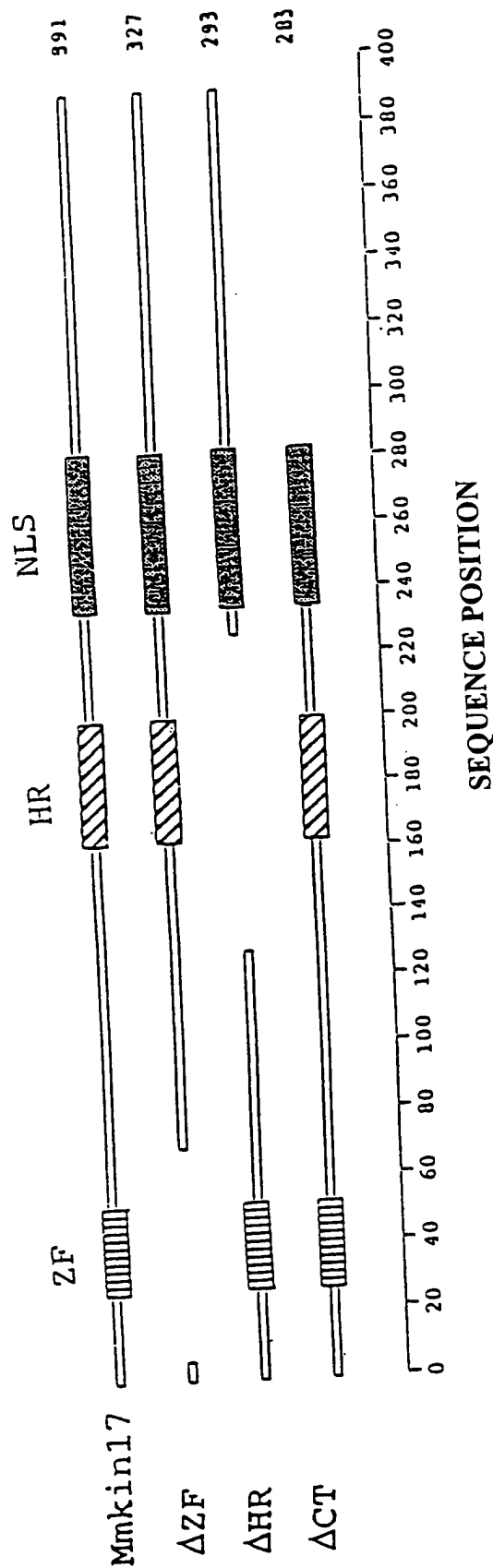


FIG. 5

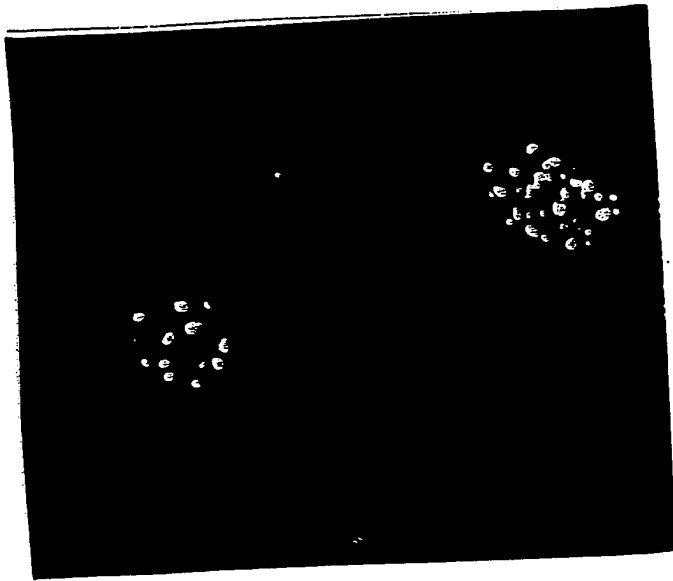


FIG. 6A

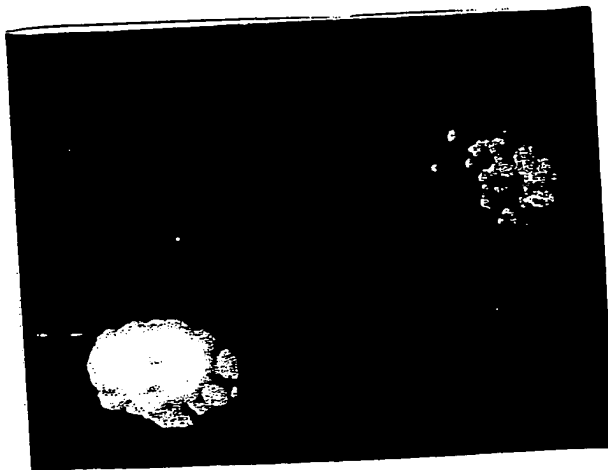
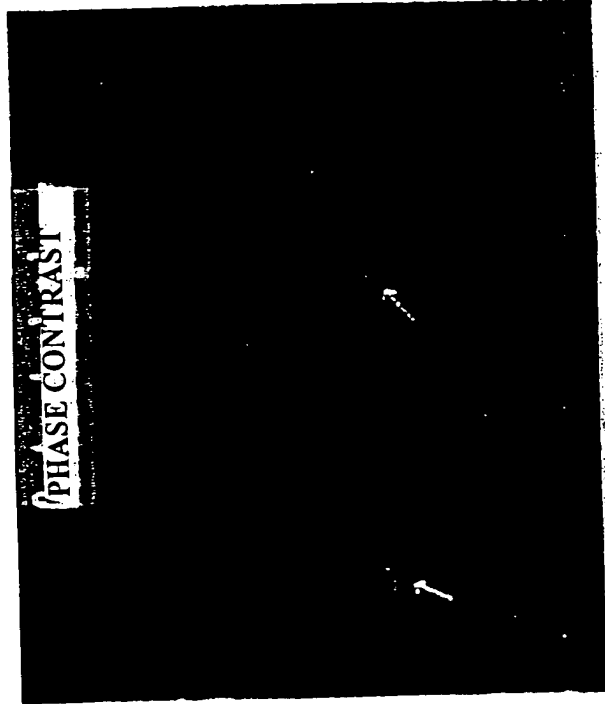
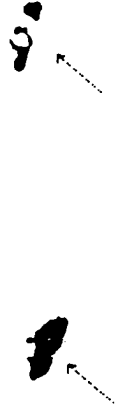


FIG. 6B



192863

FIG. 7B



192863

FIG. 7A

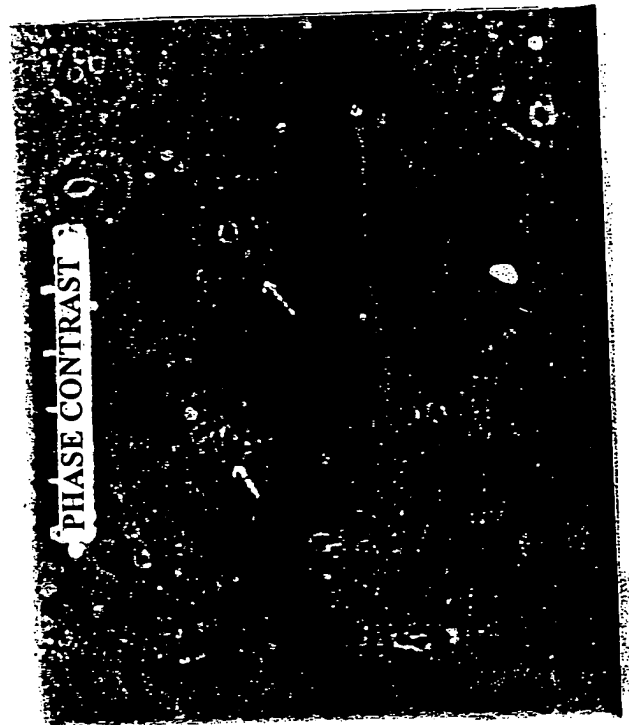
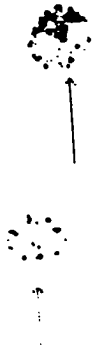




FIG. 8A

Phase-Contrast

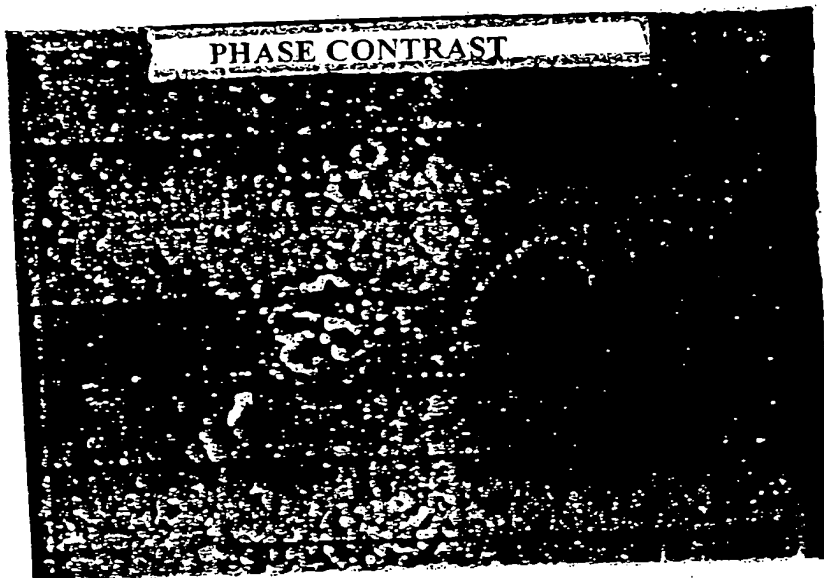
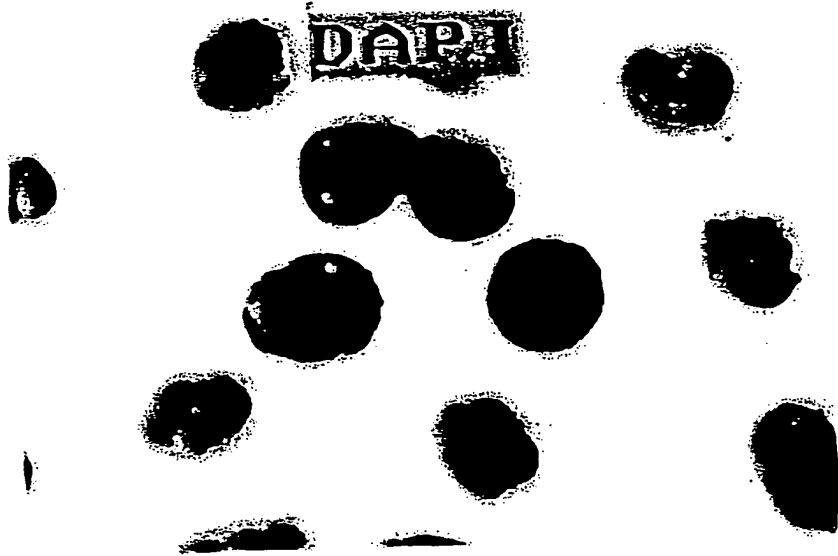
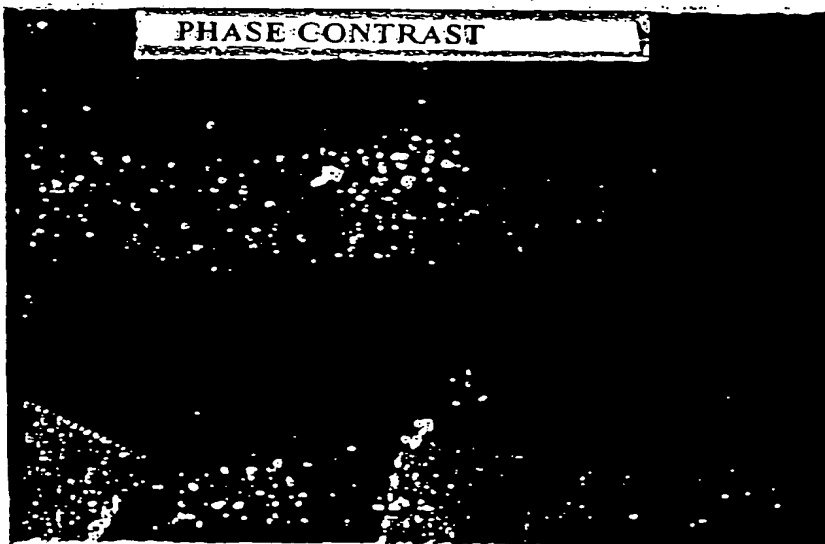
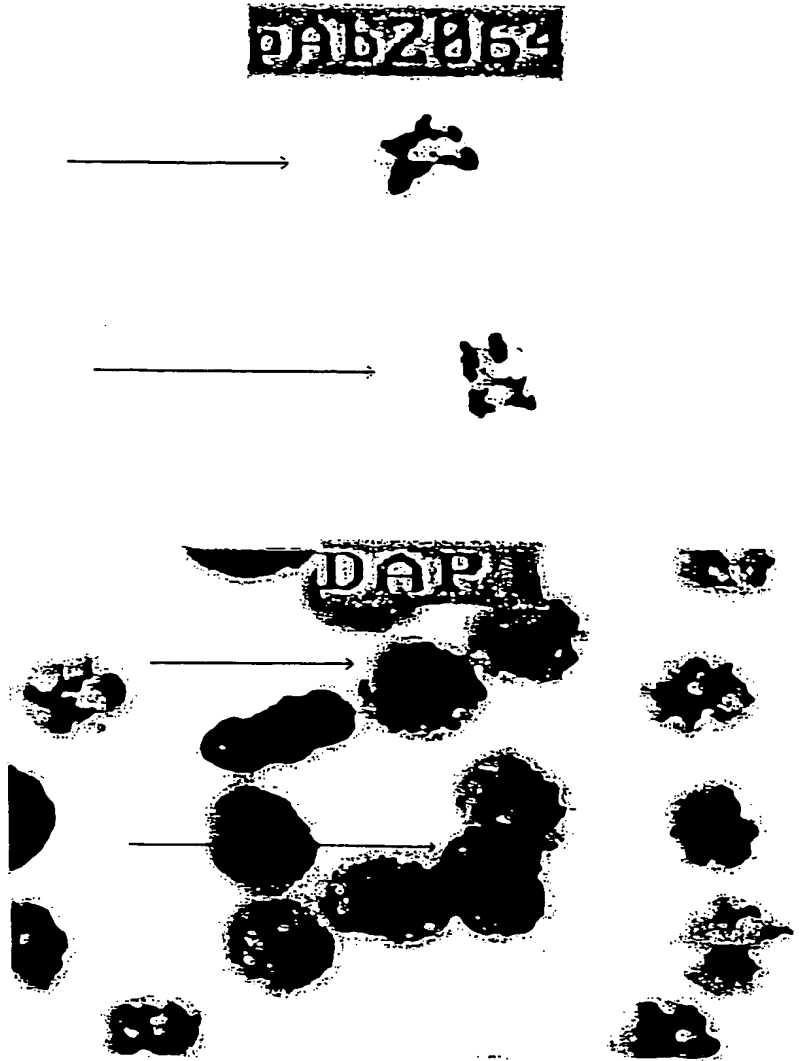




FIG. 8B



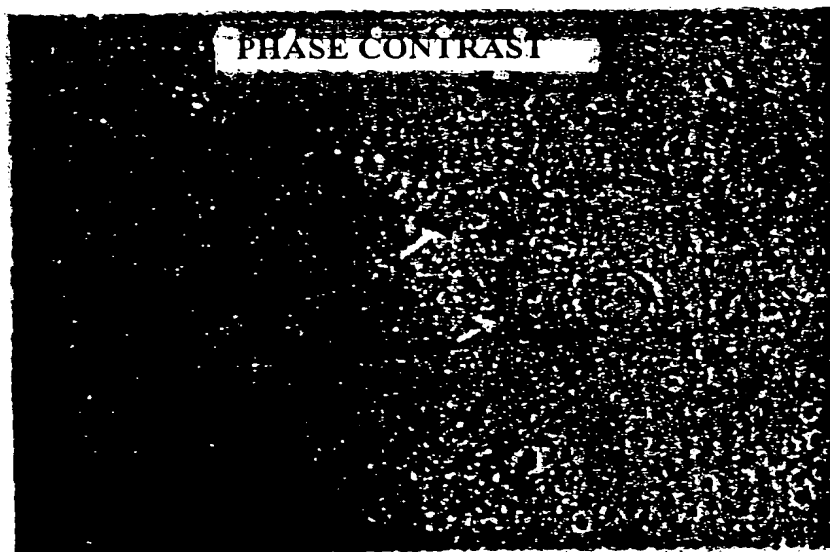
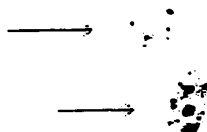
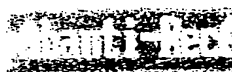


FIG. 9

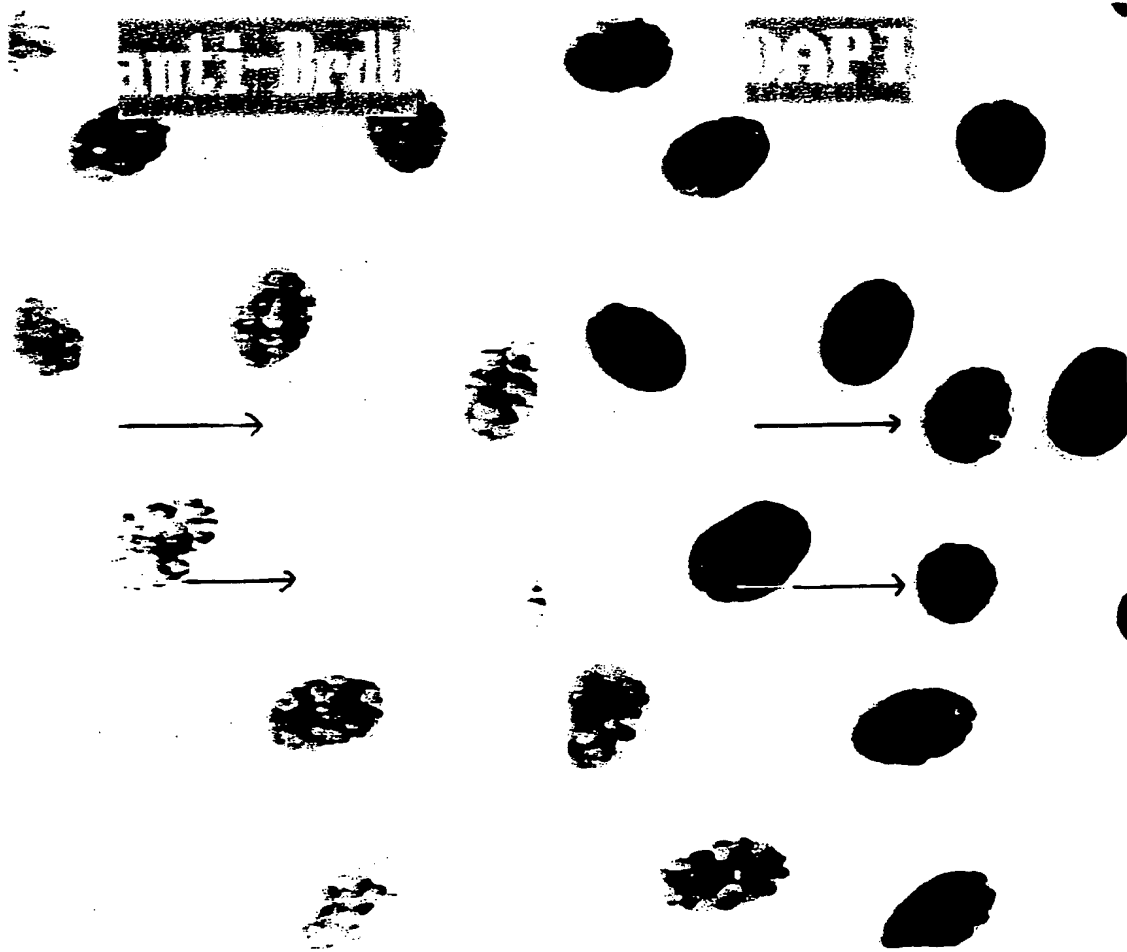
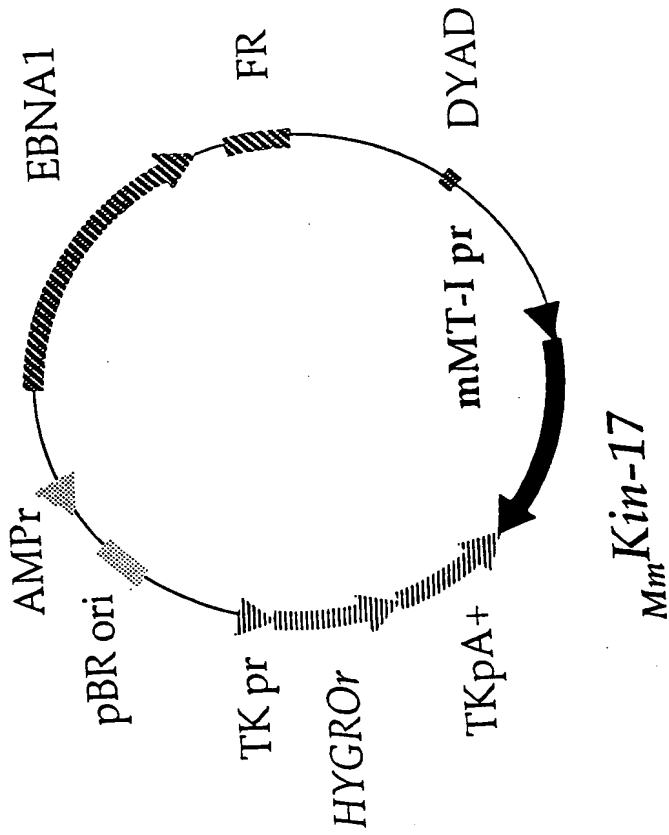
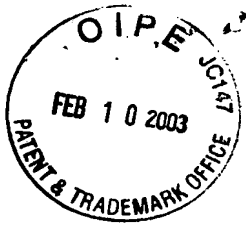


FIG. 10A



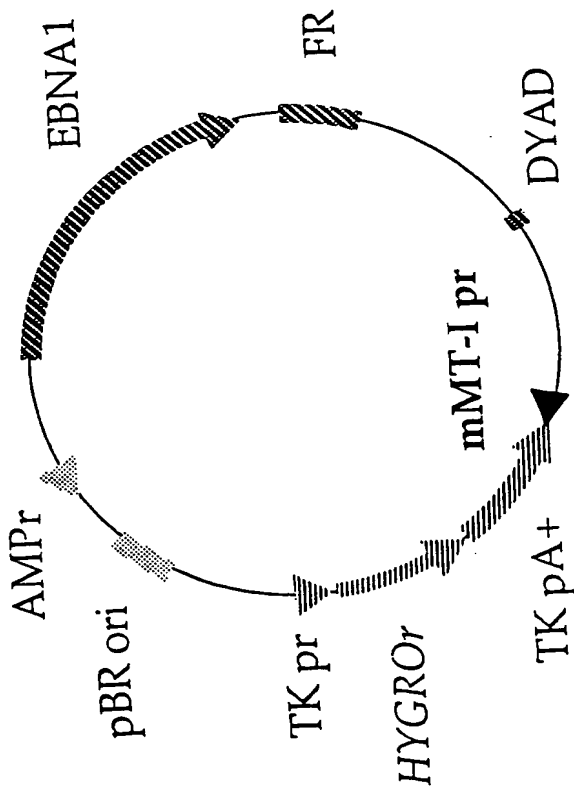
PROTEIN EXPRESSED	NONE	kin17 LOW LEVEL	kin17 HIGH LEVEL	kinΔHR	kinΔCT
% of Cells REPLICATING THEIR DNA	40	40	0	0	33

FIG. 10B



pEBVMT_{Mm}Kin17 (pB223)
(10271 bp)

FIG. 11B



pEBVMT Δ (pB220)
(8824 bp)

FIG. 11A

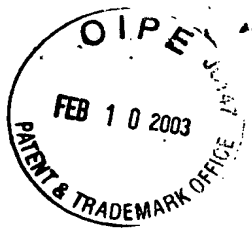


FIG. 12A

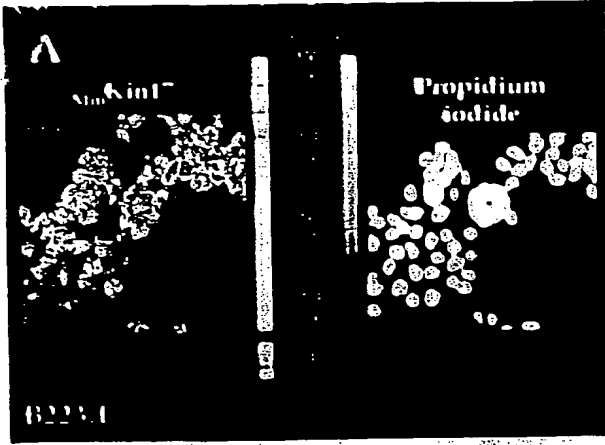


FIG. 12B

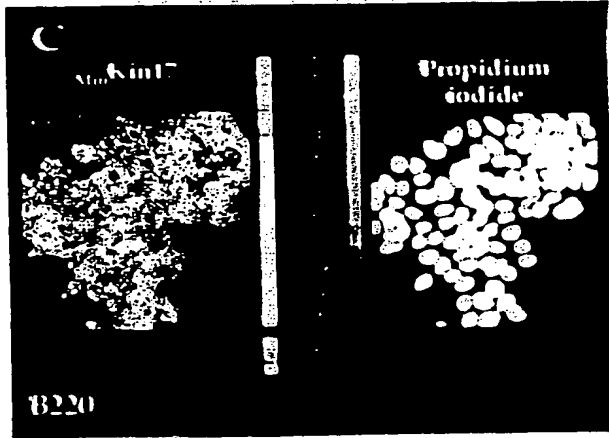
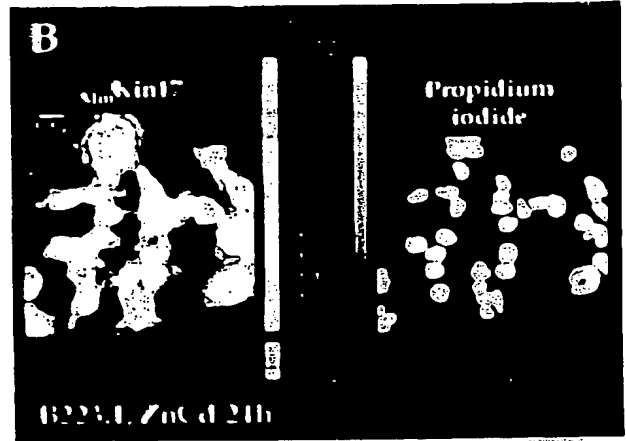


FIG. 12C

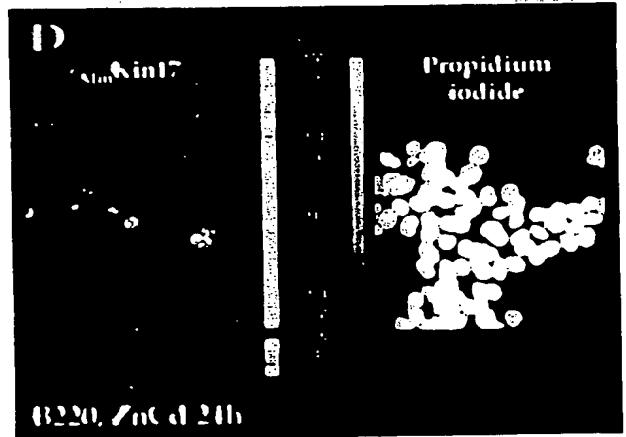


FIG. 12D

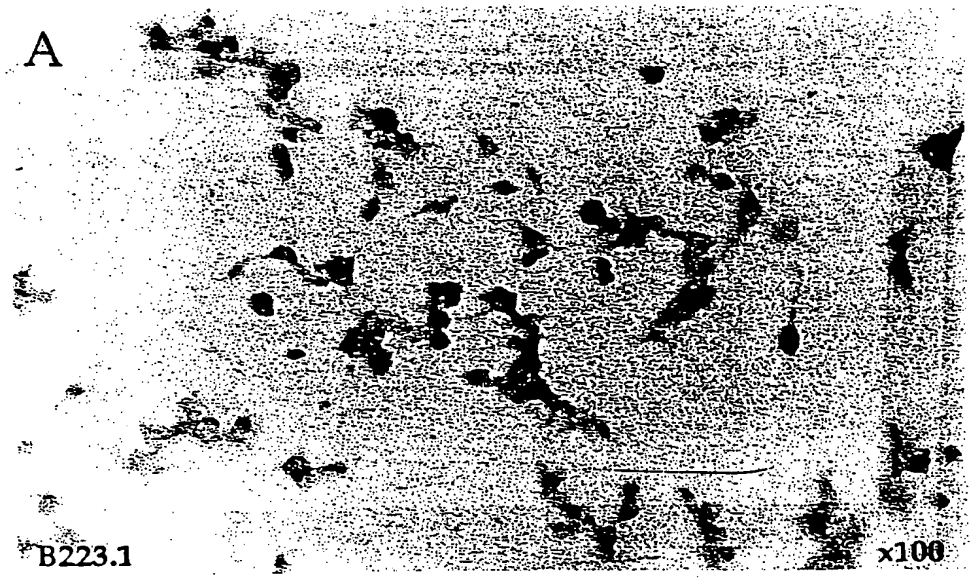


FIG. 13A

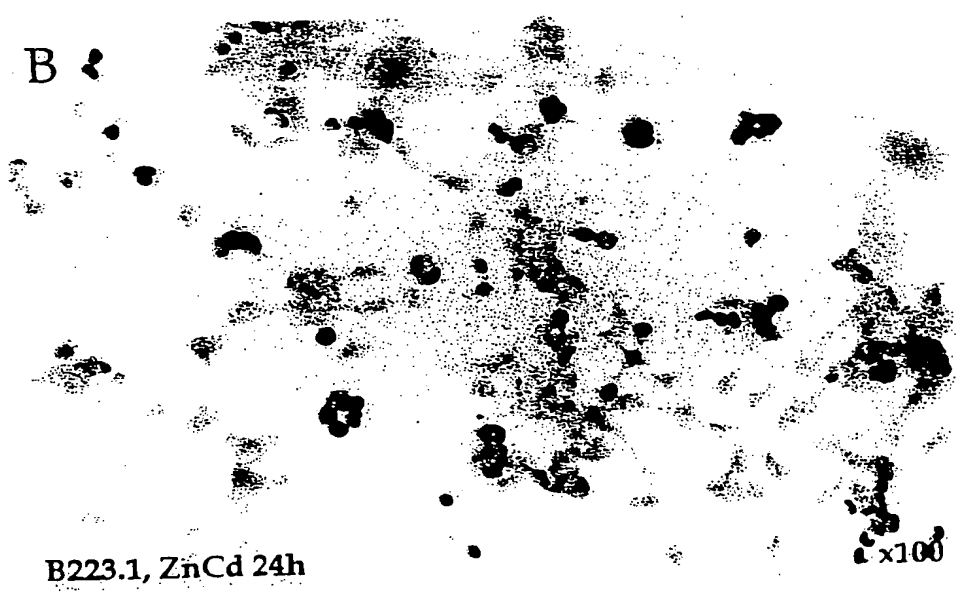


FIG. 13B

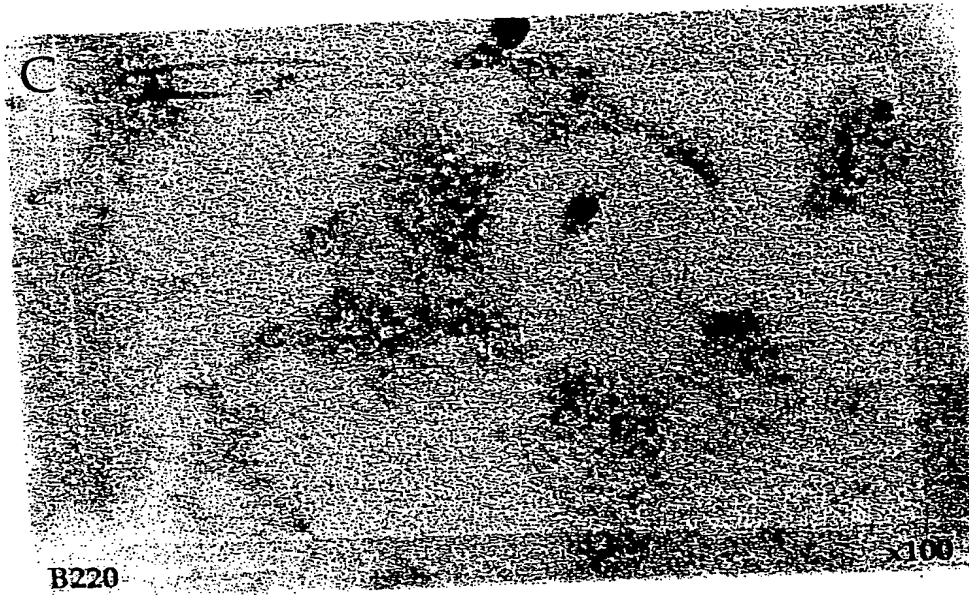
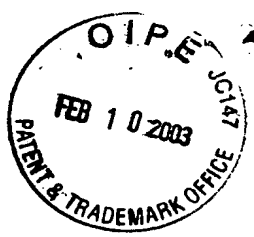


FIG. 13C

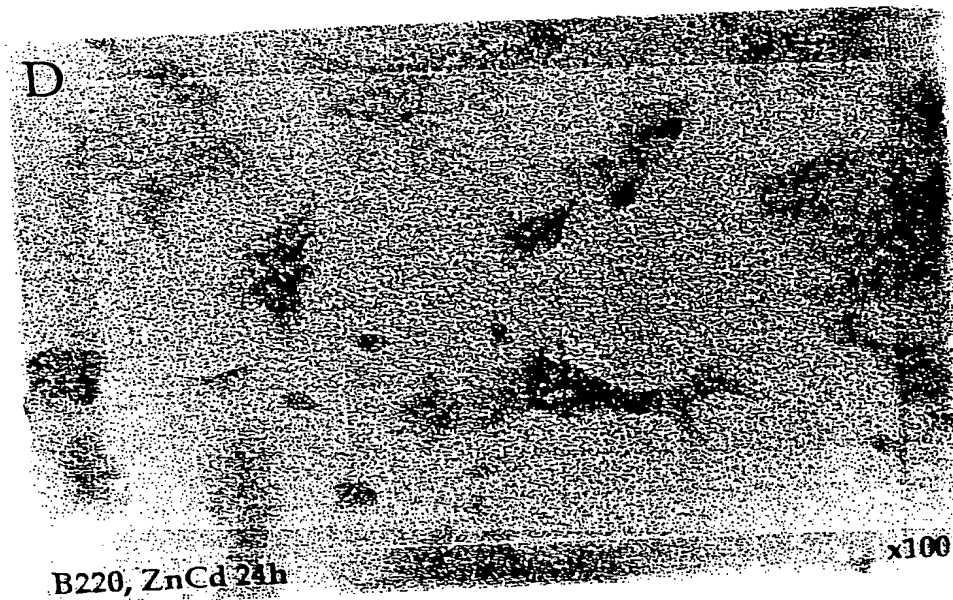
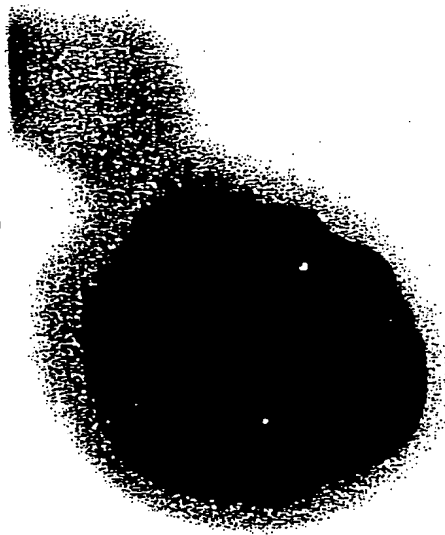


FIG. 13D



FIG. 14B



x1000

x1260

FIG. 14D

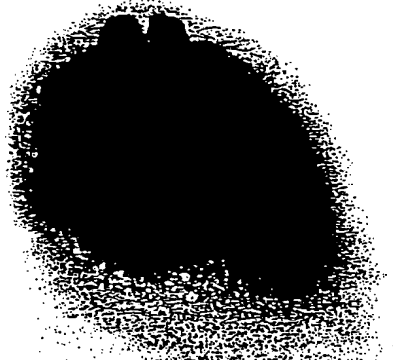
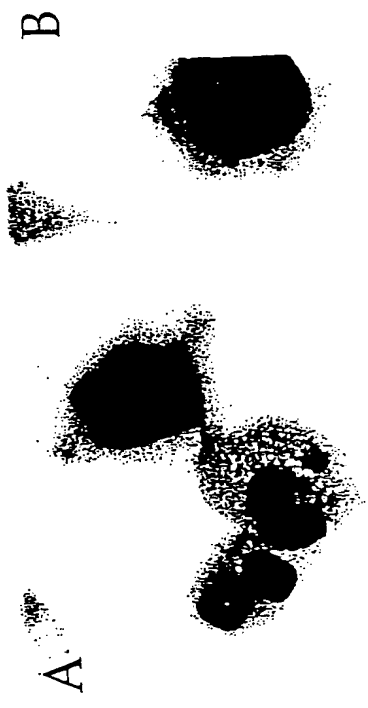


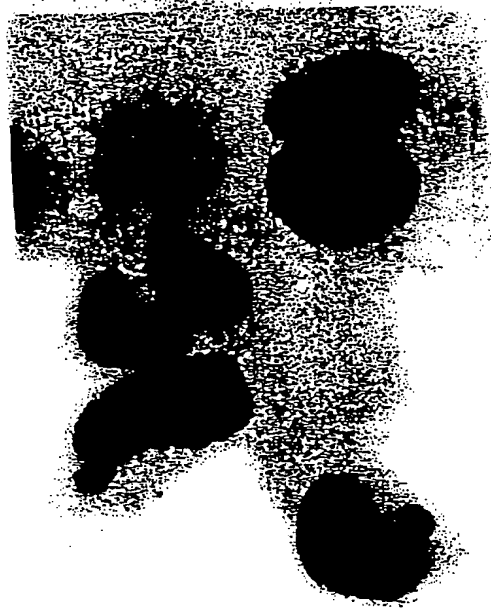
FIG. 14A



x504

x1000

FIG. 14C





x1260

FIG. 14F



x2000

FIG. 14E

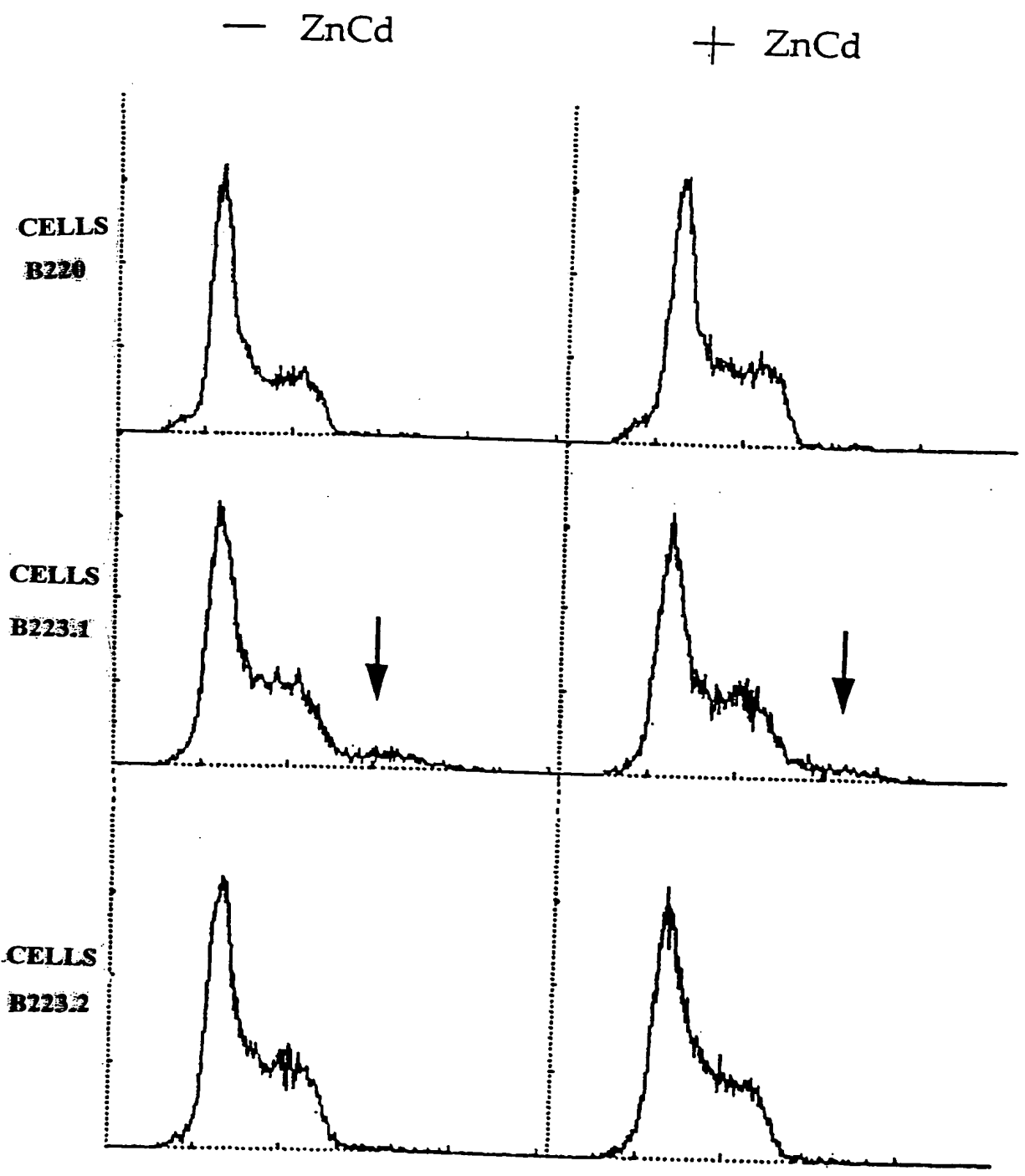


FIG. 15

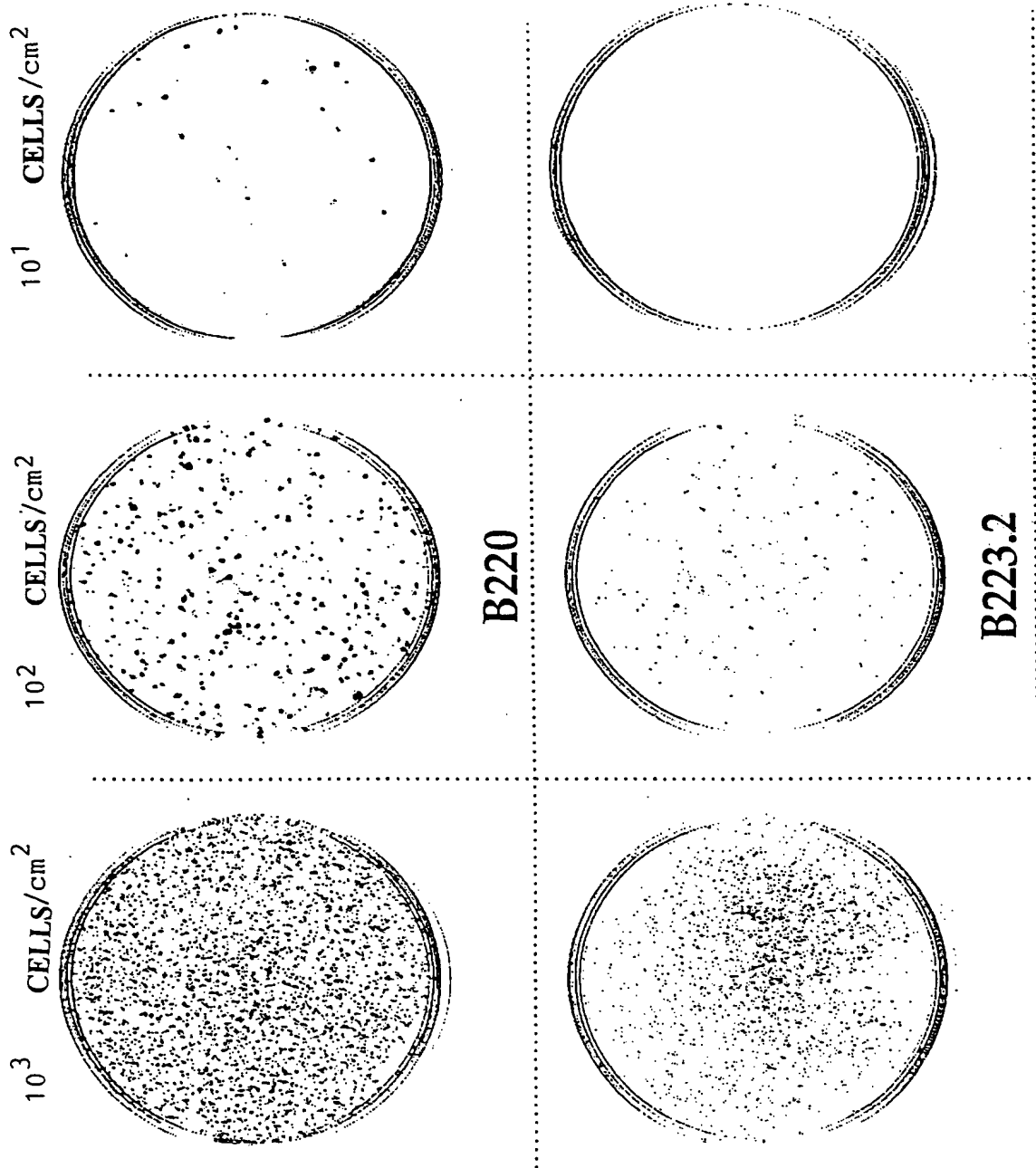


FIG. 16A

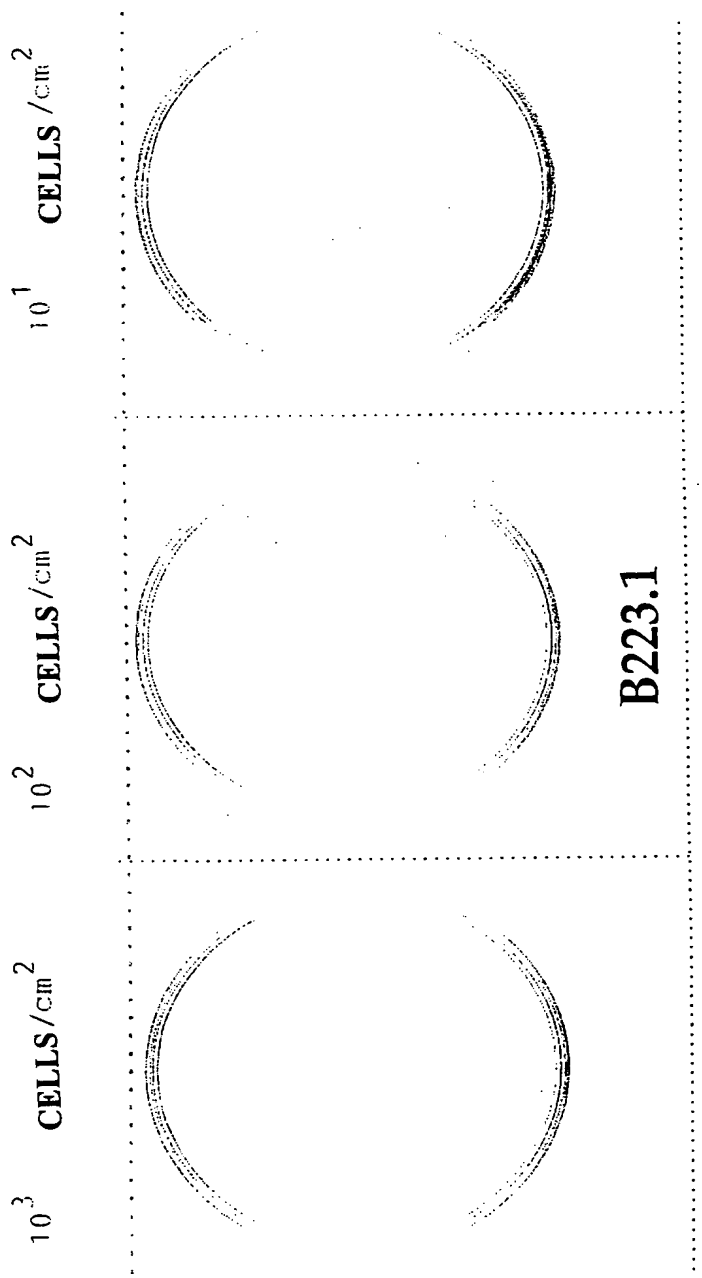


FIG. 16B



FIG. 17A

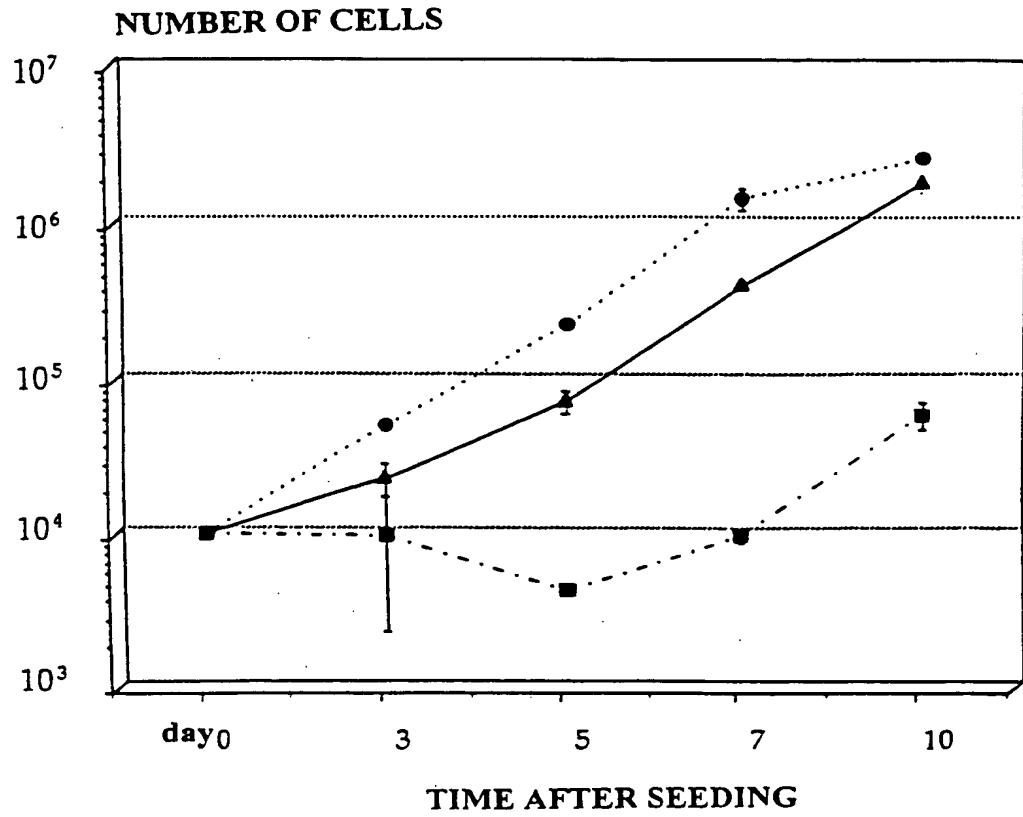
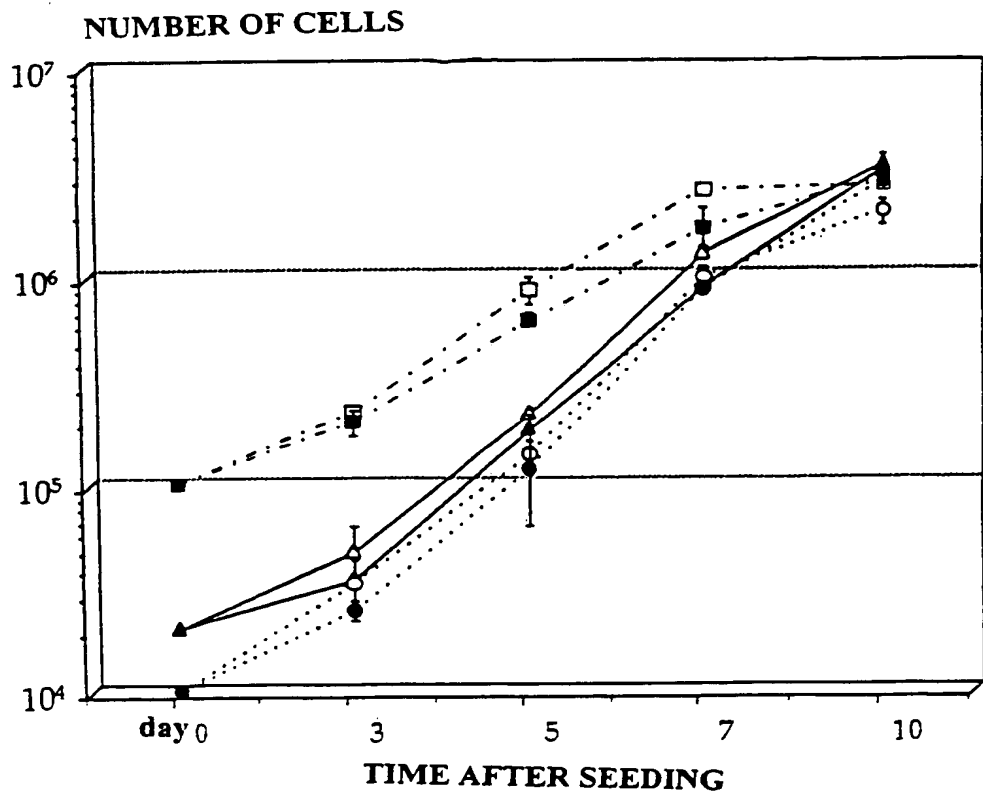
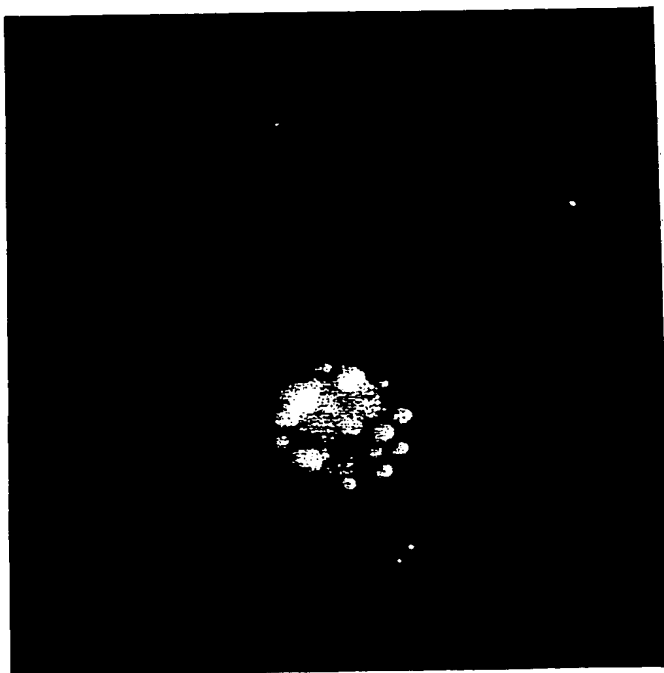


FIG. 17B





GFPkin17NLS-CT

FIG. 18B



GFPkin17 Δ CT

FIG. 18A